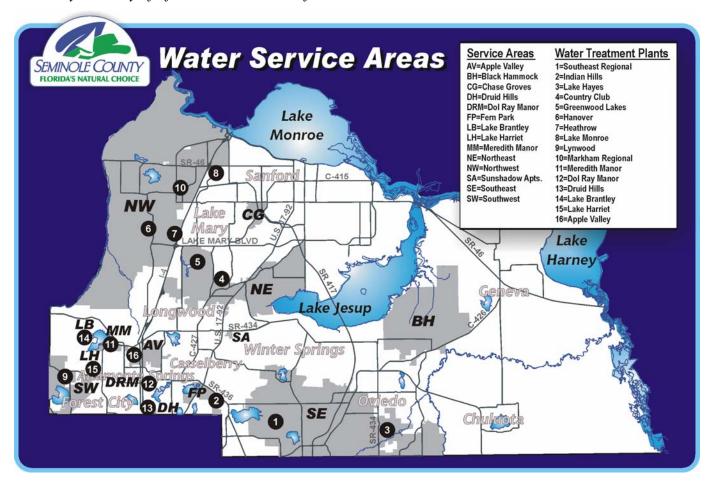
Seminole County is very pleased to provide you with the 2004 Annual Drinking Water Quality Report. We want to keep you informed about the excellent water and services delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is deep wells that draw water from the Upper Floridan Aquifer. The water is chlorinated for disinfection purposes and then fluoridated for dental health purposes. Also, the pH of the water is adjusted to protect copper pipes from corrosion.

This report presents 2004 water quality results and what they mean. If you have questions about this report or concerning your water utility, please contact our Report Coordinator at 407-665-2763 or visit our Web site on the Internet located at www.seminolecountyfl.gov/envsrvs/water/.



The Seminole County Environmental Services Department routinely monitors our 14 water service areas (see map below) for contaminants in your drinking water according to Federal and State laws, rules and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2004. Data obtained before January 1, 2004, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

We at Seminole County Environmental Services Department work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water source, which is the heart of our community, our way of life and our children's future.



# Important Information about your Drinking Water



The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- (A) <u>Microbial contaminants</u>, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) <u>Inorganic contaminants</u>, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) <u>Pesticides and herbicides</u>, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) <u>Organic chemical contaminants,</u> including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- (E) <u>Radioactive contaminants</u>, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In the table on the next page, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

- Action Level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- "NA" means not applicable.
- "ND" means not detected and indicates that the substance was not found by laboratory analysis.
- Parts per million (ppm) or Milligrams per liter(mg/l) one part by weight of analyte to 1 million parts by weight of the water sample.
- Parts per billion (ppb) or Micrograms per liter ( $\mu g/l$ ) one part by weight of analyte to 1 billion parts by weight of the water sample.
- *Picocuries per liter (pCi/L) measure of the radioactivity in water.*
- TTHM Total Trihalomethanes

#### WATER QUALITY TESTING RESULTS - BLACK HAMMOCK

WATER QUALITY TESTING RESULTS - BLACK HAIVINIOCK										
Radiological Cont	ı			T						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Alpha emitters (pCi/L)	1/02 & 3/02	No	2.6	ND - 2.6	0	15	Erosion of natural deposits			
Inorganic Contam	inants									
Barium (ppm)	02/02 & 03/02	No	0.0171	0.010 - 0.0171	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Chromium (ppb)	02/02 & 03/02	No	7.4	ND - 7.4	100	100	Discharge from steel and pulp mills; erosion of natural deposits			
Fluoride (ppm)	02/02 & 03/02	No	1.24	0.64 - 1.24	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories			
Nickel (ppb)	02/02 & 03/02	No	1.2	ND - 1.2	NA	100	Pollution from mining and refining operations. Natural occurrence in soil.			
Nitrate (as Nitrogen) (ppm)	03/04 & 06/04	No	0.011 <sup>1</sup>	ND - 0.022	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Selenium (ppb)	02/02 & 03/02	No	7.9	ND - 7.9	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines			
Sodium (ppm)	02/02 & 03/02	No	45.1	28.0 - 45.1	NA	160	Salt water intrusion, leaching from soil			
Stage 1 Disinfecta	nt/Disinfection	By-Product	(D/DBP) P	Parameters						
Haloacetic Acids (HAA) (ppb)	2004	No	28.9 <sup>1</sup>	17.9 - 46.4	NA	60	By-product of drinking water disinfection			
TTHM (ppb)	2004	No	56.8 <sup>1</sup>	47.4 - 64.5	NA	80	By-product of drinking water disinfection			
Lead and Copper	(Tap Water)									
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination			
Copper (tap water) (ppm)	2002	No	0.057	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	2002	No	4.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits			

<sup>1.</sup> Value is annual average

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

# **WATER QUALITY TESTING RESULTS - CHASE GROVES**

Radiological Contant										
Contaminant and Unit										
of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Alpha emitters (pCi/L)	3/02	No	1.2	1.0 - 1.2	0	15	Erosion of natural deposits			
Radium 228 (pCi/L)	9/03	No	0.5	0.5	0	5	Erosion of natural deposits			
Inorganic Contamina	ants									
Barium (ppm)	3/02 & 6/02	No	0.0197	0.0102 - 0.0197	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Cadmium (ppb)	3/02 & 6/02	No	0.2	ND - 0.2	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints			
Chromium (ppb)	3/02 & 6/02	No	1.1	ND - 1.1	100	100	Discharge from steel and pulp mills; erosion of natural deposits			
Fluoride (ppm)	3/02 & 6/02	No	0.773	0.620 - 0.773	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories			
Nickel (ppb)	3/02 & 6/02	No	27.9	ND - 27.9	NA	100	Pollution from mining and refining operations. Natural occurrence in soil.			
Nitrate (as Nitrogen) (ppm)	4/04	No	0.0120	0.0120	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Sodium (ppm)	3/02 & 6/02	No	25.9	16.0 - 25.9	NA	160	Salt water intrusion, leaching from soil			
Stage 1 Disinfectant	/Disinfection By	/-Product (D	/DBP) Pa	rameters						
Haloacetic Acids (HAA) (ppb)	3/04 & 10/04	No	15.2 <sup>1</sup>	5.24 - 38.2	NA	60	By-product of drinking water disinfection			
TTHM (ppb)	03/04 & 10/04	No	44.87 <sup>1</sup>	30.70 - 59.37	NA	80	By-product of drinking water disinfection			
Lead and Copper (Ta	ap Water)									
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination			
Copper (tap water) (ppm)	2004	No	0.12	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	2004	No	0.0026	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits			
Secondary Contamir	Secondary Contaminants									
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination			
Iron (ppm)	6/02	No	0.0285	0.0193 - 0.0285	0	0.3	Natural occurrence from soil leaching.			

<sup>1.</sup> Value is annual average

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

#### **WATER QUALITY TESTING RESULTS - SUNSHADOW**

Microbiological C				KESULIS -			
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly % Positive	MCLG	MC	CL	Likely Source of Contamination
Total Coliform Bacteria	2004	No	Samples 3.08	0	Preser coliform to in 5% or monthly s	bacteria more of	Naturally present in the environment; Used as an indicator that other potentially harmful bacteria may be present
Inorganic Contam	inants						<u>.</u>
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	2/02 & 3/02	No	0.016	ND - 0.016	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	2/02 & 3/02	No	0.158	ND - 0.158	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	1/03	No	0.055	ND - 0.055	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	2/02 & 3/02	No	19	11.0 - 19.0	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfecta	nt/Disinfection I	By-Product (	D/DBP) Pa	arameters			
Chlorine (ppm)	2004	No	1.1 <sup>1</sup>	0.2 - 2.5	4	4	Water Additives used to control microbes
Haloacetic Acids (HAA) (ppb)	2004	No	30.8 <sup>1</sup>	18.9 - 68.1	NA	60	By-product of drinking water disinfection
TTHM (ppb)	2004	No	58.8 <sup>1</sup>	37.6 - 104.4	NA	80	By-product of drinking water disinfection
Lead and Copper	(Tap Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	2004	No	0.34	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppm)	2004	No	2.1	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits
Secondary Contai	minants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Level	Range of Results	MCLG	MCL	Likely Source of Contamination
Color (color units)  1. Value is annual average	2/02 & 3/02	No	15	ND - 15	0	15	Naturally occurring organics

<sup>1.</sup> Value is annual average

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

#### **WATER QUALITY TESTING RESULTS - NORTHEAST**

Radiological Contami	nants							
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination	
Alpha emitters (pCi/L)	9/03	No	0.1	ND - 0.1	0	5	Erosion of natural deposits	
Radium 228 (pCi/L)	2/02	No	1.1	ND - 1.1	0	15	Erosion of natural deposits	
Inorganic Contaminar	nts							
Fluoride (ppm)	2/02	No	0.81	0.80 - 0.81	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
Nitrate (as Nitrogen) (ppm)	8/03	No	0.01 <sup>1</sup>	.009018	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Sodium (ppm)	2/02	No	7.0	5.9 - 7.0	NA	160	Salt water intrusion, leaching from soil	
Stage 1 Disinfectant/D	Disinfection By-Pro	oduct (D/DBP)	) Parameter	S				
Chlorine (ppm)	2004	No	1.5 <sup>1</sup>	1.0 - 2.0	4	4	Water additives used to control microbes	
Haloacetic Acids (HAA) (ppb)	2004	No	23 <sup>1</sup>	10 - 34	NA	60	By-product of drinking water disinfection	
TTHM (ppb)	2004	No	76 <sup>1</sup>	59 - 100	NA	80	By-product of drinking water disinfection	
Lead and Copper (Tap	Water)							
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination	
Copper (tap water) (ppm)	2004	Yes	NA	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
Lead (tap water) (ppb)	2004	Yes	NA	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits	
Secondary Contaminants Table								
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination	
Iron (ppm)	2/02 & 6/02	Yes	0.66	ND - 0.66	NA	0.3	Natural occurrence from soil leaching	

<sup>1.</sup> Value is annual average

There was a lead and copper monitoring violation due to a failure to collect samples for the year 2004. This collection effort will be conducted during the summer 2005.

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

A single sample violation for iron occurred at the Greenwood Lakes Water Treatment Plant. Three subsequent samples were collected and analyzed in June 2002, and iron was not detected. Iron was also not detected in 2001 sampling.

The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### **WATER QUALITY TESTING RESULTS - NORTHWEST**

		QUALITI	12011110	RESULTS -	TOIT		' I
Microbiological Cor	ntaminants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly # Positive Samples	MCLG	M	CL	Likely Source of Contamination
Total Coliform Bacteria	5/04	Yes Monitoring Violation	2	0	coliform b	nce of pacteria in than one n a month	Naturally present in the environment
Radiological Contar	ninants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCL G	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	3/02, 4/02, & 6/02	No	6.9	ND - 6.9	0	15	Erosion of natural deposits
Radium 228 (pCi/L)	9/03	No	0.7	ND - 0.7	0	5	Erosion of natural deposits
Inorganic Contamin	ants						
Barium (ppm)	3/02 & 6/02	No	0.007	ND - 0.007	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	3/02 & 6/02	No	9.0	ND - 9.0	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	3/02 & 6/02	No	0.73	ND - 0.73	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel (ppb)	3/02 & 6/02	No	4.0	ND - 4.0	NA	100	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate (as Nitrogen) (ppm)	6/04	No	0.06 <sup>1</sup>	.01413	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	3/02 & 6/02	No	9.4	5.05 - 9.4	NA	160	Salt water intrusion, leaching from soil
Volatile Organic Co	ntaminants						
1,1-Dichloroethylene (ppb)	2003	No	0.76	ND - 0.76	7	7	Discharge from industrial chemical factories
Stage 1 Disinfectant	t/Disinfection By	-Product (D/	DBP) Para	ameters			
Chlorine (ppm)	2004	No	1.3 <sup>1</sup>	0.9 - 1.6	4	4	Water additives used to control microbes
Haloacetic Acids (HAA) (ppb)	2004	No	12 <sup>1</sup>	7 - 15	NA	60	By-product of drinking water disinfection
TTHM (ppb)	2004	No	70 <sup>1</sup>	62 - 87	NA	80	By-product of drinking water disinfection
Lead and Copper (T	ap Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCL G	AL	Likely Source of Contamination
Copper (tap water) (ppm)	2002	No	1.3	2	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)  1. Value is annual average	2002	No	5.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

<sup>1.</sup> Value is annual average

During the month of May 2004, two (2) Total Coliform samples showed the presence of total coliform bacteria, which led to a monitoring violation. The standard is that no more than one (1) sample may do so. The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### WATER QUALITY TESTING RESULTS - SOUTHEAST

Migrobiological Ocuta				KLSULIS -			
Microbiological Conta	minants				1		
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly % Positive Samples	MCLG	MC.	L	Likely Source of Contamination
Total Coliform Bacteria	2004	No	1.4	0	Present coliform b in 5% or n monthly sa	acteria nore of	Naturally present in the environment; Used as an indicator that other potentially harmful bacteria may be present
Radiological Contami	nants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Radium 228 (pCi/L)	9/03	No	0.5	0.5	0	5	Erosion of natural deposits
Inorganic Contaminan	its						
Barium (ppm)	1/02 & 7/02	No	0.011	ND - 0.011	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	1/02 & 7/02	No	0.95	ND - 0.95	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (point of entry) (ppb)	1/02 & 7/02	No	6.1	ND - 6.1	NA	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate (as Nitrogen) (ppm)	6/04	No	0.01 <sup>1</sup>	.007015	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	1/02 & 7/02	No	38.0	5.1 - 38.0	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant/D	isinfection By-Pr	oduct (D/DBF	P) Paramet	ers			
Chlorine (ppm)	2004	No	1.3	1.1 - 1.9	4	4	Water additives used to control microbes
Haloacetic Acids (HAA) (ppb)	2004	No	25 <sup>1</sup>	14 - 35	NA	60	By-product of drinking water disinfection
TTHM (ppb)	2004	No	73 <sup>1</sup>	58 - 85	NA	80	By-product of drinking water disinfection
Lead and Copper (Tap	Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	2003	No	0.518	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	2003	No	0.00196	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

<sup>1.</sup> Value is annual average

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### WATER QUALITY TESTING RESULTS - SOUTHWEST

Microbiological Contaminants										
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly # Positive Samples	MCLG	Mo	CL	Likely Source of Contamination			
Total Coliform Bacteria	4/04	Yes Monitoring Violation	3	0	Presence bacteria in than one a mo	n no more sample in	Naturally present in the environment			
Inorganic Contami	inants									
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Nitrate (as Nitrogen) (ppm)	2004	No	0.008	0.008	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Sodium (ppm)	2/02	No	11.0	NA	NA	160	Salt water intrusion, leaching from soil			
Stage 1 Disinfecta	nt/Disinfection E	By-Product (	D/DBP) Pa	arameters						
Chlorine (ppm)	2004	No	1.5 <sup>1</sup>	0.92 - 3.3	4	4	Water additives used to control microbes			
Haloacetic Acids (HAA) (ppb)	12/04	No	21 <sup>1</sup>	NA	NA	60	By-product of drinking water disinfection			
TTHM (ppb)	12/04	Yes Reporting Violaiton	48 <sup>1</sup>	NA	NA	80	By-product of drinking water disinfection			
Lead and Copper (	(Tap Water)									
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL		AL	Likely Source of Contamination			
Copper (tap water) (ppm)	2003	No	0.92	1	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	2003	No	6.6	1	0	15	Corrosion of household plumbing systems, erosion of natural deposits			

<sup>1.</sup> Value is annual average

During the month of April 2004, three (3) of our Total Coliform samples showed the presence of total coliform bacteria, which led to a monitoring violation. The standard is that no more than one (1) sample may do so.

Sampling for the Total Trihalomethanes was conducted outside of the regular sampling schedule from July 1-September 30, 2004. Therefore, a sampling violation was issued.

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### WATER QUALITY TESTING RESULTS - APPLE VALLEY

Radiological Conta	minants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	10/03	No	2.1	NA	0	15	Erosion of natural deposits
Radium 228 (pCi/L)	10/03	No	0.5	0.5	0	5	Erosion of natural deposits
Inorganic Contamir	nants						
Barium (ppm)	02/02	No	0.0074	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium (ppb)	02/02	No	NA	NA	5	5	Corrision of galvanized pipes: erosion of natural deposit: discharge from metal refineries: run off from waste batteries and paints.
Fluoride (ppm)	02/02	No	0.11	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	10/04	No	0.13	NA	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	02/02	No	13	NA	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectan	t/Disinfection B	y-Product (D	)/DBP) Pa	rameters			
TTHM (ppb)	10/04	No	26	NA	NA	100	By-product of drinking water disinfection
Haloacetic Acids (HAA) (ppb)	10/04	No	44	NA	NA	60	By-product of drinking water disinfection
Lead and Copper (7	Гар Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL		AL	Likely Source of Contamination
Copper (tap water) (ppm)	2004	No	0.945	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	2004	No	0.0025	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

1. Value is annual average

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The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### **WATER QUALITY TESTING RESULTS - DOL RAY MANOR**

Radiological Contar	ninants								
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination		
Alpha emitters (pCi/l)	03/03	No	3.5	NA	0	15	Erosion of natural deposits		
Radium 228 (pCi/L)	03/03	No	0.7	NA	0	5	Erosion of natural deposits		
<b>Inorganic Contamin</b>	ants								
Barium (ppm)	03/03	No	0.0047	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits		
Fluoride (ppm)	03/03	No	0.17	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories		
Nickle (ppb)	03/03	No	2.4	NA	NA	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder		
Nitrate (as Nitrogen) (ppm)	10/04	No	2.2	NA	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits		
Sodium (ppm)	03/03	No	20	NA	NA	160	Salt water intrusion, leaching from soil		
Stage 1 Disinfectant	t/Disinfection By	y-Product (D	/DBP) Pa	rameters					
TTHM (ppb)	10/04	No	2	NA	NA	100	By-product of drinking water disinfection		
Haloacetic Acids (HAA) (ppb)	10/04	No	10	NA	NA	60	By-product of drinking water disinfection		
Lead and Copper (T	ap Water)								
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination		
Copper (tap water) (ppm)	07/02	No	0.61	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Lead (tap water) (ppb)	07/02	No	1.8	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits		
Secondary Contaminants Table									
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination		
Odor (threshold odor number)	2003	Yes	11	ND - 11	NA	3	Natural occurrence from soil leaching		

An odor violation occurred in 2003 where the MCL for this parameter was exceeded. There are no serious health concerns associated with these results.

The state allows us to monitor some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### WATER QUALITY TESTING RESULTS - DRUID HILLS

Radiological Contar	minants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	03/03	No	1.2	NA	0	15	Erosion of natural deposits
Radium 228 (pCi/L)	03/03	No	0.7	NA	0	5	Erosion of natural deposits
<b>Inorganic Contamin</b>	ants						
Barium (ppm)	03/03	No	0.011	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	03/03	No	0.95	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (point of entry) (ppb)	03/03	No	6.1	NA	NA	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate (as Nitrogen) (ppm)	10/04	No	0.015	NA	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	03/03	No	7.9	NA	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant	t/Disinfection B	y-Product (D	/DBP) Pa	rameters			
TTHM (ppb)	10/04	No	79	NA	NA	80	By-product of drinking water disinfection
Haloacetic Acids (HAA) (ppb)	10/04	No	17	NA	NA	60	By-product of drinking water disinfection
Lead and Copper (T	ap Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	07/02	No	0.46	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

<sup>1.</sup> Value is annual average

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The Source Water Assessment and Protection Program (SWAPP) has completed an assessment and their records indicate no potential sources of contamination. Please see the following website to review the results. http://www.dep.state.fl.us/swapp/SelectCounty.asp

#### **WATER QUALITY TESTING RESULTS - FERN PARK**

	****	WOYELL !		KESULIS -	. <b>–</b> 1313		•
Radiological Contami	nants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	03/02	No	1.4	ND - 1.4	0	15	Erosion of natural deposits
Inorganic Contaminar	its						
Barium (ppm)	03/02	No	0.0111	0.0067 - 0.0111	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium (ppb)	03/02	No	0.14	0.05 - 0.14	5	5	Corrision of galvanized pipes: erosion of natural deposit: discharge from metal refineries: run off from waste batteries and paints.
Fluoride (ppm)	03/02	No	0.999	0.139 - 0.999	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	03/04 & 11/04	No	0.21	0.07 - 0.21	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	03/02	No	4.66	4.4 - 4.66	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant/D	isinfection By-Pr	oduct (D/DBP	) Paramete	ers			
Haloacetic Acids (HAA) (ppb)	2004	No	14	6 - 25	NA	60	By-product of drinking water disinfection
TTHM (ppb)	2004	No	28 <sup>1</sup>	15 - 42	NA	80	By-product of drinking water disinfection
Lead and Copper (Tap	Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	8/02	No	0.687	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	8/02	No	2.8	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits
Secondary Contamina	ints Table						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Odor (threshold odor number)	03/02, 04/02, & 11/02	Yes	8	ND - 8	NA	3	Natural occurrence from soil leaching

<sup>1.</sup> Value is annual average

An odor violation occurred in 2003 where the MCL for this parameter was exceeded. There are no serious health concerns associated with these results.

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#### WATER QUALITY TESTING RESULTS - LAKE BRANTLEY

Radiological Contamin	ants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	03/03	No	3.7	NA	0	15	Erosion of natural deposits
Radium 228 (pCi/L)	03/03	No	1.5	NA	0	5	Erosion of natural deposits
Inorganic Contaminant	S						
Barium (ppm)	03/03	No	0.0092	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	03/03	No	0.19	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	03/03	No	0.003	NA	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	03/03	No	13	NA	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant/Di	sinfection By-Pro	duct (D/DBP)	Paramete	rs			
TTHM (ppb)	10/04	No	42	NA	NA	80	By-product of drinking water disinfection
Haloacetic Acids (HAA) (ppb)	10/04	No	0.18	NA	NA	60	By-product of drinking water disinfection
Lead and Copper (Tap	Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	07/02	No	0.23	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	07/02	No	4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits
Secondary Contaminar	nts Table						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Odor (threshold odor number)	2003	Yes	15	ND - 15	NA	3	Natural occurrence from soil leaching

1. Value is annual average

An odor violation occurred in 2003 where the MCL for this parameter was exceeded. There are no serious health concerns associated with these results.

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## **WATER QUALITY TESTING RESULTS - LAKE HARRIET**

Radiological Contami	nants						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	03/03	No	0.3	NA	0	15	Erosion of natural deposits
Radium 228 (pCi/L)	03/03	No	0.9	NA	0	5	Erosion of natural deposits
Inorganic Contaminan	its						
Barium (ppm)	03/03	No	0.0078	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	03/03	No	0.13	NA	4	4	Discharge from metial refineries and coal-burning factories: discharged from electronic, aerospace, and defense industries.
Fluoride (ppm)	03/03	No	0.21	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	10/04	No	0.016	NA	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	03/03	No	5.6	NA	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant/D	isinfection By-Pro	oduct (D/DBP)	) Paramete	rs			
TTHM (ppb)	10/04	No	71	NA	NA	80	By-product of drinking water disinfection
Haloacetic Acids (HAA) (ppb)	10/04	No	16	NA	NA	60	By-product of drinking water disinfection
Lead and Copper (Tap	Water)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	08/02	No	0.8	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	08/02	No	11	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits
Secondary Contamina	ints Table						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Odor (threshold odor number)	2003	Yes	21	1.0 - 21	NA	3	Natural occurrence from soil leaching

<sup>1.</sup> Value is annual average

An odor violation occurred in 2003 where the MCL for this parameter was exceeded. There are no serious health concerns associated with these results.

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## WATER QUALITY TESTING RESULTS - MEREDITH MANOR

Radiological Contamina	nts						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	03/03	No	1.1	NA	0	15	Erosion of natural deposits
Radium 228 (pCi/L)	03/03	No	1.1	NA	0	5	Erosion of natural deposits
Inorganic Contaminants							
Barium (ppm)	03/03	No	0.0051	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	03/03	No	0.19	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	10/04	No	0.0079	NA	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	03/03	No	7.7	NA	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant/Dis	infection By-F	Product (D/D	BP) Param				
TTHM (ppb)	10/04	No	20	NA	NA	80	By-product of drinking water disinfection
Haloacetic Acids (HAA) (ppb)	10/04	No	38	NA	NA	60	By-product of drinking water disinfection
Lead and Copper (Tap V	Vater)						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	08/02	No	0.51	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Secondary Contaminant	ts Table						
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Odor (threshold odor number)	2003	Yes	23	1.1 - 23	NA	3	Natural occurrence from soil leaching

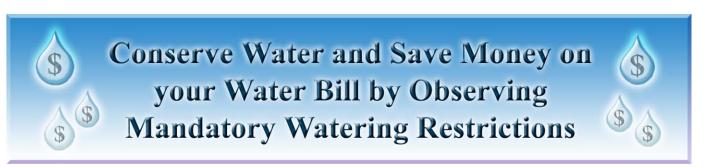
<sup>1.</sup> Value is annual average

An odor violation occurred in 2003 where the MCL for this parameter was exceeded. There are no serious health concerns associated with these results.

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# SEMINOLE COUNTY ENVIRONMENTAL SERVICES 2004 ANNUAL DRINKING WATER QUALITY REPORT





- **♦** No watering between 10 a.m. and 4 p.m.
- ♦ Residential customers with <u>odd</u> street numbers water on Wednesdays and/or Saturdays.
- ♦ Residential customers with <u>even</u> street numbers water on Thursdays and/or Sundays.
- ♦ Commercial and other\* customers water on Tuesdays and/or Fridays. (\*Also includes subdivision common areas, schools, churches, government and recreational facilities)
- Watering may be done at any time with a hand-held hose provided it is fitted with an automatic shutoff nozzle.

Watering Restrictions are set at the maximum recommended watering rate for St. Augustine sod, as determined by University of Florida research. Even during the hottest driest part of the summer, your grass only needs water twice a week, ¾ inch each time.